

Serial No. <sup>09</sup>/901,427**REMARKS**

This paper is submitted in response to the Office Action dated September 24, 2002, and in supplement to Applicants' January 13, 2003, Amendment Under 37 C.F.R. §1.111. Claims 1-9, 11, 12, 14-25, 27-33, 36-41, 43-49, 52-57, 59-65, 68-73 and 75-98 stand rejected under 35 U.S.C. §112, first paragraph, as not being enabling. Claims 2-3, 7, 18-19, 23, 39, 55, 71, 83-84 and 91 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 1, 6-10, 17, 22-26, 33, 38-42, 49, 54-58, 65, 70-74, 81, 82, 87-91 and 98 stand rejected under 35 U.S.C. §102(b) as being anticipated by Wilpers et al. Claims 2-5, 11-15, 18-21, 27-31, 34-37, 43-47, 50-53, 59-63, 66-69, 75-79, 83-86 and 92-96 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wilpers et al. Claims 1-98 stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 10, 12-18, 24, 27-30, 42 and 44-81 of copending Application No. <sup>09</sup>/293,401 and claims 1-20 of copending Application No. <sup>09</sup>/539,529. New claims 99-126 were added in Applicants' January 13, 2003, Amendment Under 37 C.F.R. §1.111.

Each of the outstanding rejections was addressed fully in Applicants' January 13, 2003, Amendment Under 37 C.F.R. §1.111. This paper is submitted to present additional arguments in traversal of the rejection under §112, first paragraph, of claims 1-9, 11, 12, 14-25, 27-33, 36-41, 43-49, 52-57, 59-65, 68-73 and 75-98 for comprising the term "adhesive," and to submit the attached 37 C.F.R. §1.132 DECLARATION OF DR. ROBERT KNOLL in support thereof. The term "adhesive" is present in independent claims 17, 33, 49, 65 and 82, as well as new independent claims 127 and 141.

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**I. REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH**

Claims 1, 4-10 and 13-20 stand rejected on the grounds that the specification does not teach what materials, other than maleic anhydride, would be used for the "adhesive." This rejection was addressed in Applicants' January 13, 2003, Amendment Under 37 C.F.R. §1.111. Specifically, that amendment indicated that: (1) the rejection failed to state a prima facie rejection, and that a prima facie rejection cannot be made out, (2) the specification speaks generically to using an "adhesive" throughout the specification --except in the examples -- and directs persons of skill in the art to employ "an appropriate adhesive," (3) at least these portions of the specification would direct one of ordinary skill in the art to seek out an alternative "adhesive" to the recited example of maleic anhydride, (4) no undue experimentation would be required for one of ordinary skill in the art to substitute other adhesives known to those of ordinary skill in the art in place of the disclosed maleic anhydride, (5) the MPEP and controlling case law require undue experimentation for one of ordinary skill in the art to arrive at substitute adhesives, and (6) the MPEP and the controlling case law clearly prohibit basing this rejection solely on the assertion that maleic anhydride is the only disclosed embodiment of the adhesive. The Examiner is respectfully directed to the January 13, 2003, Amendment Under 37 C.F.R. §1.111, itself to review these summarized positions in their entirety.

Applicants respectfully submit the following supplemental arguments in traversal of the outstanding rejection of claims 1, 4-10 and 13-20 under 35 U.S.C. §112, first paragraph, for use of the term "adhesive" and submit the attached 37 C.F.R. §1.132 DECLARATION OF DR. ROBERT KNOLL in support thereof.

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**(A) Use Of Other Adhesives Is Supported**

Applicants respectfully assert that the disclosure does not limit the adhesives to maleic anhydride modified polypropylene. The application broadly recites the objectives of the invention throughout the specification with the purposely generic term "adhesive." Indeed, the Summary Of The Invention describes the invention broadly with the generic term "adhesive." (See Specification, p. 3, lines 5-9). What could be more telling of the broad nature of the disclosure than presenting the very Summary Of The Invention with the broad term "adhesive?" Similarly, the Abstract Of The Disclosure broadly discloses the present invention as comprising an "adhesive such as maleic anhydride concentrate." (Emphasis added). Here, the Abstract Of The Disclosure not only uses the broad term "adhesive" to advise the skilled artisan that a broad array of adhesives may be employed with the invention, but the language clearly indicates that the adhesive may be, but is not limited to, maleic anhydride modified polypropylene.<sup>1</sup> The phrase "such as" in the Abstract makes the exemplary nature of the maleic anhydride disclosure crystal clear to a skilled artisan and prohibits the disclosure from being limited to that one exemplary adhesive. (See, Declr. of Knoll, ¶5).

The purposely broad characterization of the invention in the Abstract Of The Disclosure and Summary Of The Invention reflects the broad nature of the specification as a whole -- as it should. The specification as a whole uses the broad term "adhesive" not less than forty times to describe the agent employed to bond the layers to one another. Only after broadly defining the adhesive does the disclosure provide a specific example of maleic anhydride modified polypropylene. The use of the generic term "adhesive" throughout the

<sup>1</sup> See ¶5 of the attached 37 C.F.R. §1.132 DECLARATION OF DR. ROBERT KNOLL submitted in support of this position.

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disclosure, except where the specific examples are given, speaks volumes. If Applicants had intended to limit the adhesive to just maleic anhydride modified polypropylene, then disclosure would simply have used the term "maleic anhydride modified polypropylene" throughout rather than the purposely generic term "adhesive." The specification as a whole leaves the choice of the particular "adhesive" to the person of ordinary skill in the art consistent with the objectives of the invention, as seen in the following sentence from page 5, lines 13-15, of the specification:

**An appropriate adhesive** (discussed in detail below) is chosen dependant upon the material of the middle layer 25 to bond the inner and outer layers 24, 28 thereto. (Emphasis added)

This language expressly encourages the skilled artisan to consider all known adhesive without limitation to those specifically recited. (See, Declr. of Knoll, 99). The disclosure cannot be said to limit the adhesive to any one particular adhesive agent since the specification expressly encourages one of ordinary skill in the art to chose appropriate adhesives in addition to the examples expressly provided.

The rejection gives undue weight on the preamble to the examples of the first embodiment described under the heading of "First Embodiment" on page nine of the specification (Applicants believe the citation to page fourteen in the rejection is in error) which accurately describes the subsequently listed examples as comprising maleic anhydride modified polypropylene. This preamble is only a precursor to the ten subsequent examples cited as embodying the first embodiment of the invention. It does not define the invention as a whole, or even the first embodiment as a whole; especially in light of the specification's broad definition of the invention. That this language relied on by the rejection is merely part of the examples is made clear by the specification as a whole. For example, the first

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embodiment is earlier described generically as employing an "adhesive" in line 21 of page 6, to line 2 of page 7, of the specification, reproduced here:

Thus, in a first embodiment of the present invention, the inner and outer layers 24, 28 may comprise a mixture of polypropylene and an adhesive ("polypropylene/adhesive mixture") while the middle layer 26 is comprised of EVOH without an added adhesive. **Examples of this first embodiment are provided below.** (Emphasis added)

The fact that the first embodiment is specifically described using the purposely generic term "adhesive" offsets any significance give to a later description of the adhesive as maleic anhydride modified polypropylene. One of ordinary skill in the art, viewing this initial description of the first embodiment as comprising an "adhesive" in conjunction with the later description of the first embodiment adhesive as maleic anhydride modified polypropylene would consider that later description as exemplary only. (See, Declr. of Knoll, ¶10). If the invention was to be limited to maleic anhydride modified polypropylene, then why would the first embodiment be described generically as employing an "adhesive?" The skilled artisan would not understand that later description to limit the scope of the invention to maleic anhydride modified polypropylene. (See, Declr. of Knoll, ¶10). The second sentence in the above quote (i.e. "Examples of this first embodiment are provided below.") further supports this. The very fact that the disclosure promises that examples will follow this broad description of the first embodiment signals that the preceding broad description was intended to define the scope of that embodiment. That sentence also clarifies that the sentences on page 9, upon which the rejection relies, are in fact merely a preamble to the examples of the first embodiment. It specifically alludes to the fact that subsequent descriptions are examples. In light of that sentence, one of ordinary skill in the art would consider the sentences on page

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9, lines 13-15, of the specification to be a preamble to the examples of the first embodiment. (See, Declr. of Knoll, ¶11).

Because the disclosure must be viewed as a whole, the recitation of maleic anhydride modified polypropylene in the preamble to the examples of the First Embodiment must be viewed in light of the remainder of the specification -- including the Summary Of The Invention, Abstract Of The Disclosure (which broadly and succinctly recite the scope of the invention) and the generic description of the first embodiment. Applicants respectfully assert that by focusing on the preamble to the examples, the rejection takes that preamble out of the appropriate context provided by the specification as a whole. When that preamble is read in light of the entire specification, one of ordinary skill in the art would understand that the use of the term "adhesive" throughout the specification (save the examples) gives breadth to the teachings so as to indicate to the skilled artisan that other adhesives could be employed. (See, Declr. of Knoll, ¶11). When read in light of the entire specification, one of ordinary skill in the art would understand that the use of the broad term "adhesive" in the Summary Of The Invention indicates that maleic anhydride modified polypropylene is a mere example of the appropriate adhesives. (See, Declr. of Knoll, ¶6). When read in light of the entire specification, one of ordinary skill in the art would understand that the phrase "an adhesive such as maleic anhydride" in the Abstract Of The Disclosure again identifies maleic anhydride modified polypropylene as a mere example of the appropriate adhesives, and that other adhesives are available. (See, Declr. of Knoll, ¶5). When the preamble to the examples of the First Embodiment is read in light of the entire specification, one of ordinary skill in the art would understand the sentence "*An appropriate adhesive (discussed in detail below) is chosen dependant upon the material of the middle layer 26 to bond the inner and outer layers*

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24, 28 *thereto*." as indicating that a variety of additional adhesives are available to accomplish the disclosed invention and that experimentation would reveal those additional adhesives to the skilled artisan. (*See*, Declr. of Knoll, ¶11). When the preamble to the examples of the First Embodiment is read in light of the broad description of the first embodiment (i.e. "Thus, in a first embodiment of the present invention, the inner and outer layers 24, 28 may comprise a mixture of polypropylene and an adhesive ("polypropylene/adhesive mixture") while the middle layer 26 is comprised of EVOH without an added adhesive. Examples of this first embodiment are provided below."), one of ordinary skill in the art would understand the preamble to the examples of the First Embodiment to be mere examples of the broadly defined invention. (*See*, Declr. of Knoll, ¶10). The specification must be taken as a whole. When doing so, the language relied on by the rejection is shown to be a mere preamble to the examples of a broadly disclosed embodiment. The specification as a whole discloses a broader invention employing known adhesives. (*See*, Declr. of Knoll, ¶11). Nothing more is required by 35 U.S.C. §112, first paragraph. "[I]t is irrelevant whether this teaching is provided through **broad terminology** or illustrative examples." *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)(*Citing, In re Marzocchi*, 439 F.2d 220, 223 (C.C.P.A. 1971))(Emphasis added).

The ultimate question, as shown by the following language of 35 U.S.C. §112, first paragraph, is whether one of ordinary skill in the art would understand the specification as a whole to disclose use of adhesives other than maleic anhydride modified polypropylene with the claimed invention:

The specification shall...**enable any person skilled in the art** to which it pertains, or with which it is most nearly connected, to make and use the same.... (Emphasis added)

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The prior art of record in this application evinces the large number of adhesives known to those of ordinary skill in the art for bonding layers of the claimed materials. Looking through the eyes of one having ordinary skill in the art, the specification directs the skilled artisan to these other known adhesives. (See, e.g., "[a]n *appropriate adhesive* (discussed in detail below) is *chosen dependant upon the material of the middle layer 26 to bond the inner and outer layers 24, 28 thereto.*" Specification, p. 5, lines 13-15). (See, Declr. of Knoll, ¶9). By way of example, U.S. Patent No. 3,932,692 to Hirata et al. ("Hirata") discloses many possible adhesives understood by one of ordinary skill in the art as appropriate for bonding a layer of polyolefin (such as polypropylene) to a layer of saponified ethylene-vinyl acetate copolymer (such as EVOH); including maleic anhydride, maleic anhydride modified polypropylene and others. (See, column 5, line 59 to column 8, line 68). These adhesives were known to those of ordinary skill in the art as appropriate for accomplishing the objectives of the invention and need not have been disclosed in the present application. "Information which is well known in the art need not be described in detail in the specification." MPEP §2163. See, also, *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986); *S3 Inc. v. Nvidia Corp.*, 259 F.3d 1364, 11371 (Fed. Cir. 2001)("The law is clear that patent documents need not include subject matter that is known in the field of the invention and is in the prior art, for patents are written for persons experienced in the field of the invention."). Indeed, an artisan of ordinary skill in the art would have understood that known adhesives, such as those of Hirata, were contemplated by the disclosure because the specification directs skilled artisans to choose from these known adhesives. (See, Declr. of Knoll, ¶13). Thus, the disclosure cannot be limited to employing



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maleic anhydride modified polypropylene as the adhesive -- regardless of what is stated in the preamble to the examples.

Moreover, "[i]t is well settled that patent applicants are not required to disclose every species encompassed by their claims...." *Enzo Biochem, Inc. v. Calgene, Inc.*, 52 U.S.P.Q.2d 1129 (Fed. Cir. 1999)(quoting, *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1445 & fn. 23 (Fed. Cir. 1999). Indeed, "an applicant...is generally allowed claims, when the art permits, which cover more than the specific embodiment shown." *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 40 U.S.P.Q.2d 1019, \_\_\_ (Fed. Cir. 1996)(quoting *In re Vickers*, 61 U.S.P.Q. 122, 125 (C.C.P.A. 1944)(Emphasis added).

Further, "[t]he presence of only one working example should never be the sole reason for rejecting claims as being broader than the enabling disclosure...." MPEP §2164.02. Here, the rejection attempts to limit the scope of the disclosure to a disclosed example, because it is the only working example provided by the specification. This rejection is prohibited by the MPEP.

Applicants respectfully request the withdrawal of this rejection.

**(B) A Layer of Maleic Anhydride Modified Polypropylene Is Supported**

The claims now recite the first layer as comprising polypropylene and maleic anhydride. In this application's parent application (Serial No. <sup>09</sup>/293,401), now allowed, the Examiner contented that if the scope of the disclosure was limited to the maleic anhydride modified polypropylene identified in the preamble of the First Embodiment examples (*See*, Specification, page 9), then the disclosure would not support a first layer made of maleic anhydride modified polypropylene without the mixing of additional maleic anhydride modified polypropylene therein. This argument is based on the reasoning that since the invention contemplates the addition of an adhesive to the base polymer and maleic anhydride

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modified polypropylene is the only disclosed adhesive (as contended by this rejection as well), then the disclosure requires the addition of maleic anhydride modified polypropylene to the base polymer regardless of the base polymer composition.

The office action acknowledges disclosure of a maleic anhydride modified polypropylene as adhesive contemplated by the invention. Thus, the disclosure admittedly supports at least an embodiment of a first layer having a maleic anhydride modified polypropylene blended with a base polypropylene. Maleic anhydride modified polypropylene comprises a base polypropylene polymer chain modified to carry maleic anhydride groups. (See, Declr. of Knoll, ¶14). Because the base polymer chain is polypropylene, the end product of this acknowledged embodiment is a layer comprising polypropylene with a predetermined amount of maleic anhydride dispersed throughout the layer on chains of the polypropylene. (See, Declr. of Knoll, ¶15).

As discussed in detail above, one of ordinary skill in the art would have been directed by the disclosure of the present application to consider alternatives to mixing maleic anhydride modified polypropylene in the polypropylene base polymer. More specifically, one of ordinary skill in the art, upon reviewing the disclosure of the present application, would have readily recognized the use of straight maleic anhydride modified polypropylene (with the polypropylene being modified to carry the claimed amount of maleic anhydride) to be an appropriate substitute for using polypropylene blended with maleic anhydride modified polypropylene. (See, Declr. of Knoll, ¶16). Both are readily known to provide the same end result -- maleic anhydride modified polypropylene. (See, Declr. of Knoll, ¶15).

The examples disclosed in the specification employ readily available, off-the-shelf maleic anhydride products available at the time of invention. (See, Declr. of Knoll, ¶18). In

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the disclosed examples, these available products were then blended with a polypropylene to dilute the maleic anhydride concentration to the desired concentrations. Had a maleic anhydride modified polypropylene been available with the desired concentrations at the time of invention, one of ordinary skill in the art would have known that the maleic anhydride modified polypropylene was an alternative. That is, the interchangeability of (i) an off-the-shelf maleic anhydride modified polypropylene and (ii) polypropylene blended with maleic anhydride modified polypropylene would have been readily apparent to one of ordinary skill in the art. (See, Declr. of Knoll, ¶16). If an off-the-shelf maleic anhydride modified polypropylene is available at the desired concentration, then that product can be used. (See, Declr. of Knoll, ¶17). If an off-the-shelf maleic anhydride modified polypropylene with the desired concentration of maleic anhydride is not available, then one having a higher maleic anhydride concentration can be blended with non-maleic anhydride modified polypropylene to achieve a tie layer with the desired concentrations of maleic anhydride. (See, Declr. of Knoll, ¶17). **The interchangeability was clear to one of ordinary skill in the art as of the priority date.** (See, Declr. of Knoll, ¶19). The only difference to one of ordinary skill in the art is whether the one resin will suffice or must two be mixed. (See, Declr. of Knoll, ¶17).

For these reasons, it is respectfully asserted that the disclosure provides support for a first layer made of maleic anhydride modified polypropylene without mixing maleic anhydride modified polypropylene therein since it was readily known to persons of ordinary skill in the art to substitute, one for the other, (i) off-the-shelf maleic anhydride modified polypropylene, and (ii) polypropylene blended with maleic anhydride modified polypropylene. "Information which is well known in the art need not be described in detail in the specification." MPEP §2163. See, also, *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*,

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231 U.S.P.Q. 81, 90 (Fed. Cir. 1986). Applicants respectfully request that this rejection be withdrawn.

**(C) Maleic Anhydride Modified Polypropylene Is Not An Essential Element**

Applicants respectfully assert that by limiting the allowed claim scope to employing maleic anhydride modified polypropylene as an adhesive, the office action improperly treats maleic anhydride modified polypropylene as an essential element of the invention. Section 2163 of the MPEP addresses the "essential element" standard stating that a "claim that omits an element which applicant describes as an essential or critical feature of the invention originally disclosed does not comply with the written description requirement." *Citing, Gentry Gallery, Inc. v. Berkline Corp.*, 45 U.S.P.Q.2d 1498, 1503 (Fed. Cir. 1998) (Emphasis added). MPEP §2163 further clarifies the "essential element" standard in connection with the *Gentry Gallery* case, stating that the holding that an element was essential to the disclosed invention was:

"premised on clear statements in the written description that described the location of a claims element -- the 'control means' -- as 'the only possible location' and that variations were 'outside the stated purpose of the invention.'" (Emphasis added).

(citing *Johnson Worldwide Assoc. v. Zebco Corp.*, 50 U.S.P.Q.2d 1607, 1613 (Fed. Cir. 1999)). Thus, to limit the scope of a disclosure to a disclosed embodiment, the disclosure must clearly state that the invention is so limited and that variations thereon are outside the purpose of the invention.

The disclosure of the present application makes no express statement that the adhesive of the invention is limited to maleic anhydride modified polypropylene. To the contrary, as discussed above, the specification: (i) speaks generically of an adhesive throughout the specification, except in the specific examples of the invention, and (ii) directs persons of

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ordinary skill in the art to consider all known adhesive appropriate for bonding the materials chosen for the layers. ("An appropriate adhesive...is chosen dependant upon the material of the middle layer 26 to bond the inner and outer layers 24, 28 thereto.") (See page 5, lines 13-15). The preamble to the first embodiment examples on page 9 of the specification does not affirmatively state that maleic anhydride modified polypropylene is the only possible adhesive for accomplishing this invention. Nor can that preamble be said to do so in light of the broad recitation of the invention (See, e.g., Abstract Of The Disclosure, Summary Of The Invention) and the specific direction to chose an "appropriate adhesive" when viewed in conjunction with the pool of knowledge in existence at the time of invention. (See, Declr. of Knoll, ¶11). The disclosure must be viewed as a whole.

Applicants respectfully assert that the disclosure nowhere states that the use of maleic anhydride modified polypropylene as the adhesive is essential to the invention or that use of another adhesive is outside the scope of the invention. Accordingly, the maleic anhydride modified polypropylene is not an essential element of the disclosed invention and Applicants respectfully request that this rejection be withdrawn.

## **II. PROVISIONAL OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION**

Claims 1-98 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 10, 12-18, 24, 27-30, 42 and 44-81 of copending U.S. Patent Application Serial No. 09/293,401, now allowed. In addition, claims 1-98 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-20 of copending U.S. Patent Application Serial No. 09/539,529. Applicants state that they will submit terminal disclaimers to overcome these provisional rejections when all other rejections have been overcome, the application is

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otherwise in condition for allowance and Serial Nos. <sup>09</sup>/293,401 and <sup>09</sup>/539,529 have been allowed. Applicants' offer to submit a terminal disclaimer shall not be construed as an admission that Applicants agree that the pending claims are obvious over any of the claims of U.S. Patent Application Serial Nos. <sup>09</sup>/293,401 and <sup>09</sup>/539,529.

### CONCLUSION


In view of the foregoing, Applicants respectfully request that the Examiner indicate all claims as allowable. If, however, any outstanding issues remain, Applicants urge the Examiner to telephone Applicants' attorney at 312-372-2000 so that the same may be resolved expeditiously.

Respectfully submitted,

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